



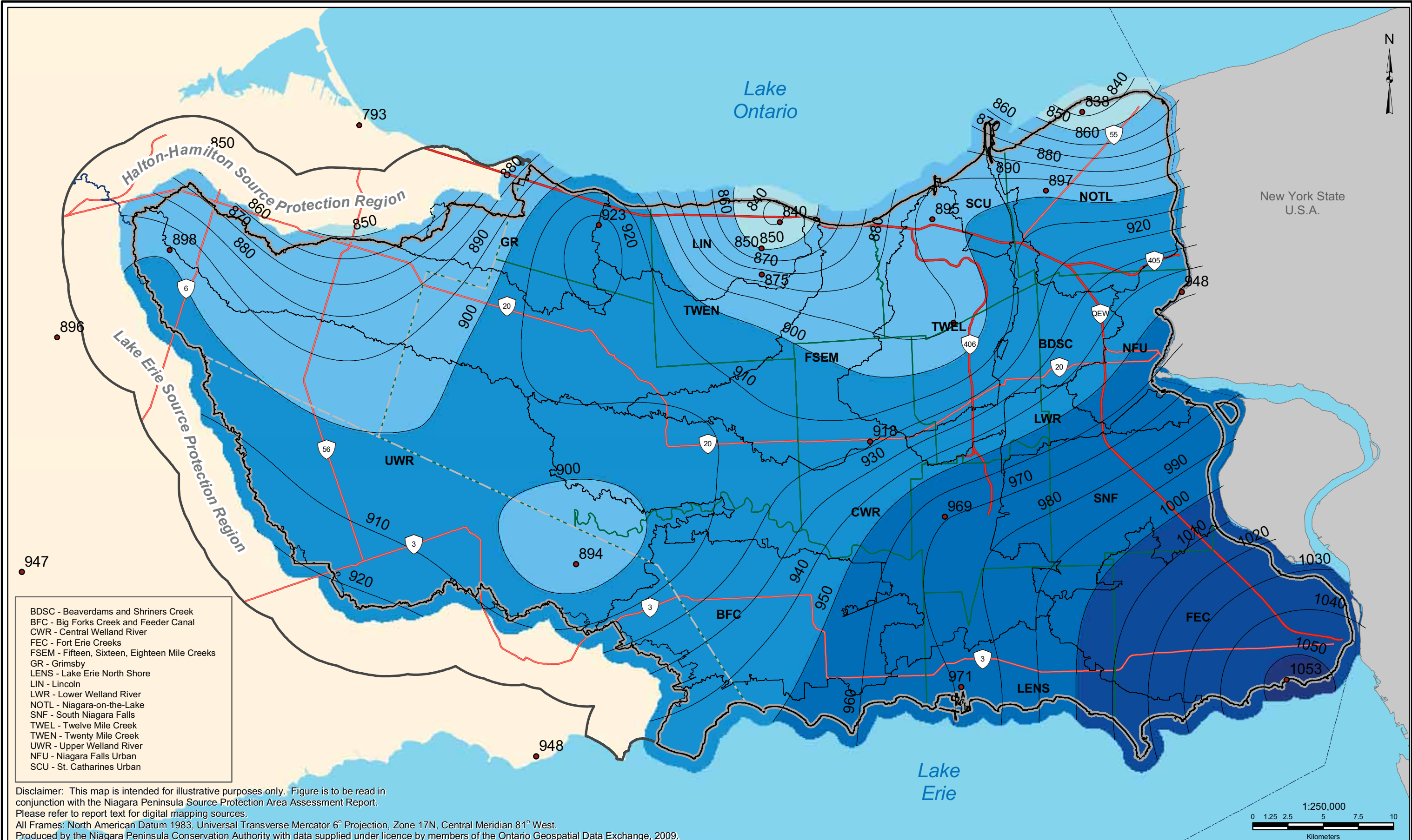
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All Frames: North American Datum 1983, Universal Transverse Mercator 6° Projection, Zone 17N, Central Meridian 81° West.

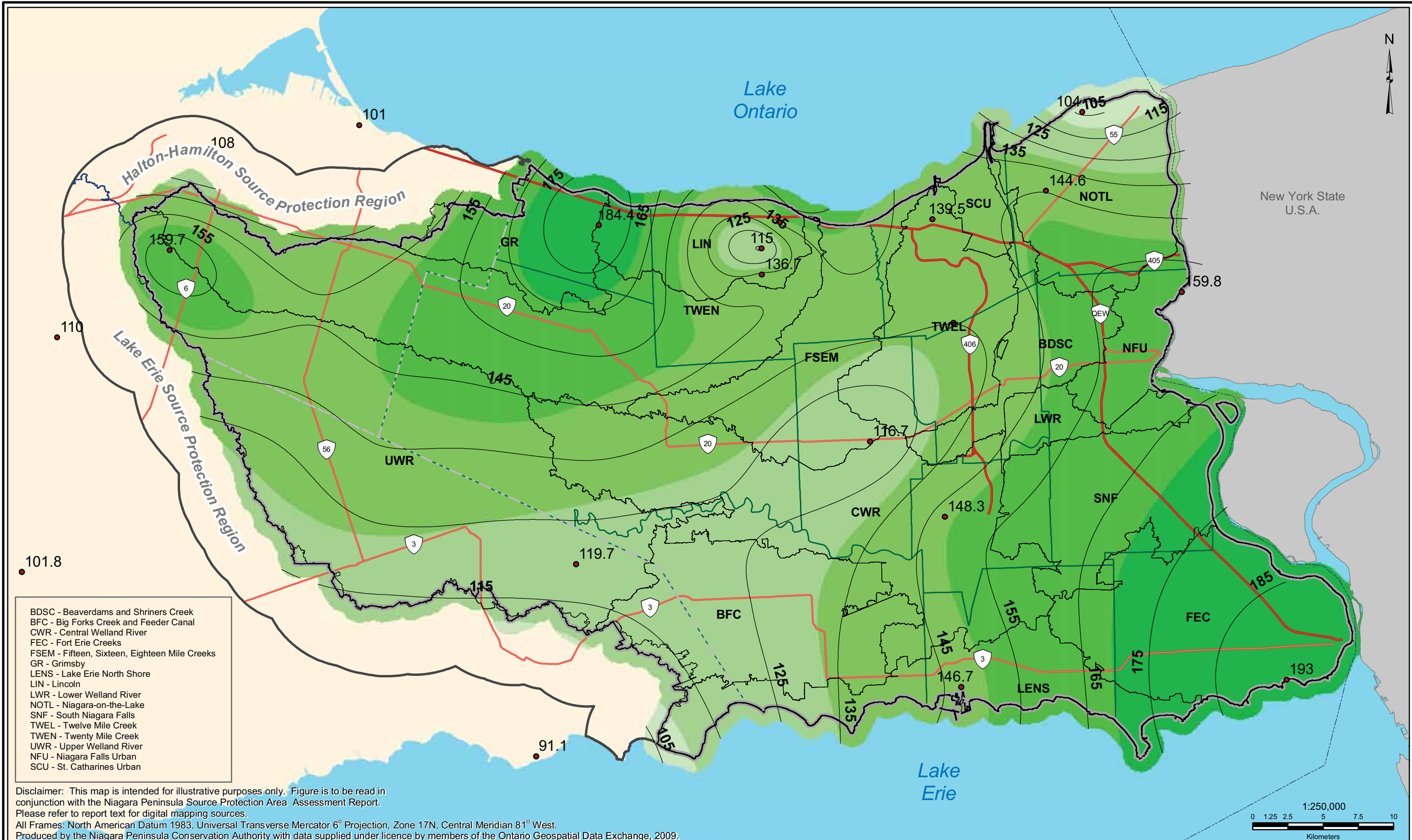
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<b>Legend</b> --- International Boundary Major Highways Highways Roads Watercourse Ponds, Reservoirs, Lakes Lower Tier Municipality Upper Tier Municipality Niagara Peninsula Source Water Protection Area	● EC Inactive Precipitation and Climate Station ● RON Inactive Climate Station ● RON Inactive Precipitation Station ● EC Active Climate Station ● EC Active Precipitation and Climate Station	● RON Active Climate Station ● RON Active Precipitation Station ● OWN Active Precipitation and Climate Station ● NPCA Active Snow Survey Station ● MOE Active Climate Station			<b>NPSPA Assessment Report</b>	
	Note: Environment Canada stations within 10 km of SWPA shown. Inactive Environment Canada stations have at least 15 years of data. Climate monitoring stations may include temperature, wind velocity, humidity and solar radiation.					
				<b>Figure 3.1: Weather Monitoring Stations</b>		
					Thursday, July 14, 2011	









**Legend**

--- International Boundary	Ponds, Reservoirs, Lakes	Lower Tier Municipality
Major Highways	Extended Context Area	Upper Tier Municipality
Highways	Source Water Protection Area	Station Mean (mm)
Watercourse	NPCA Watershed Planning Areas	10 mm Isoline

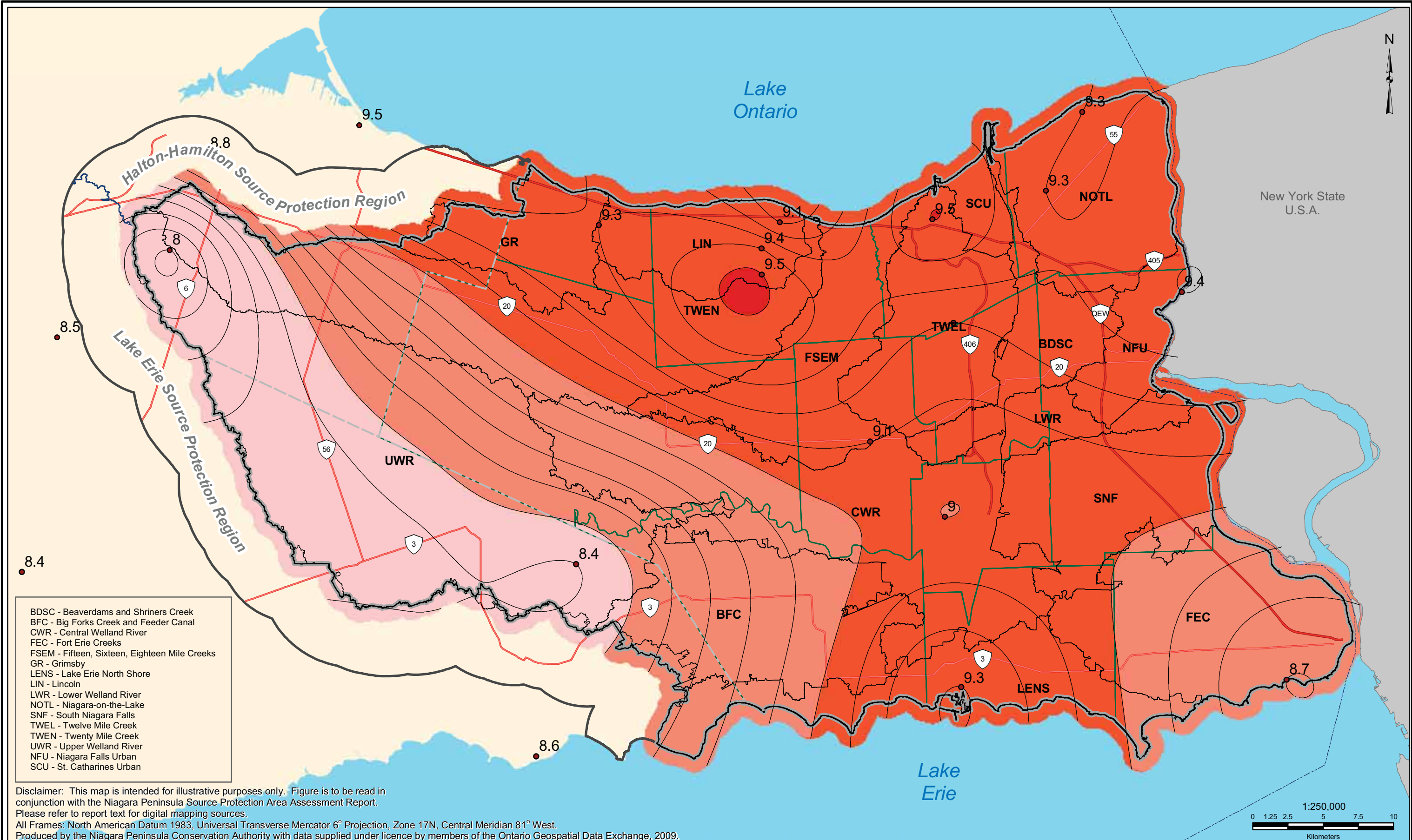
90 - 190 mm, 20 mm interval

Notes: 1991 - 2005 mean  
Contours interpolated using spline

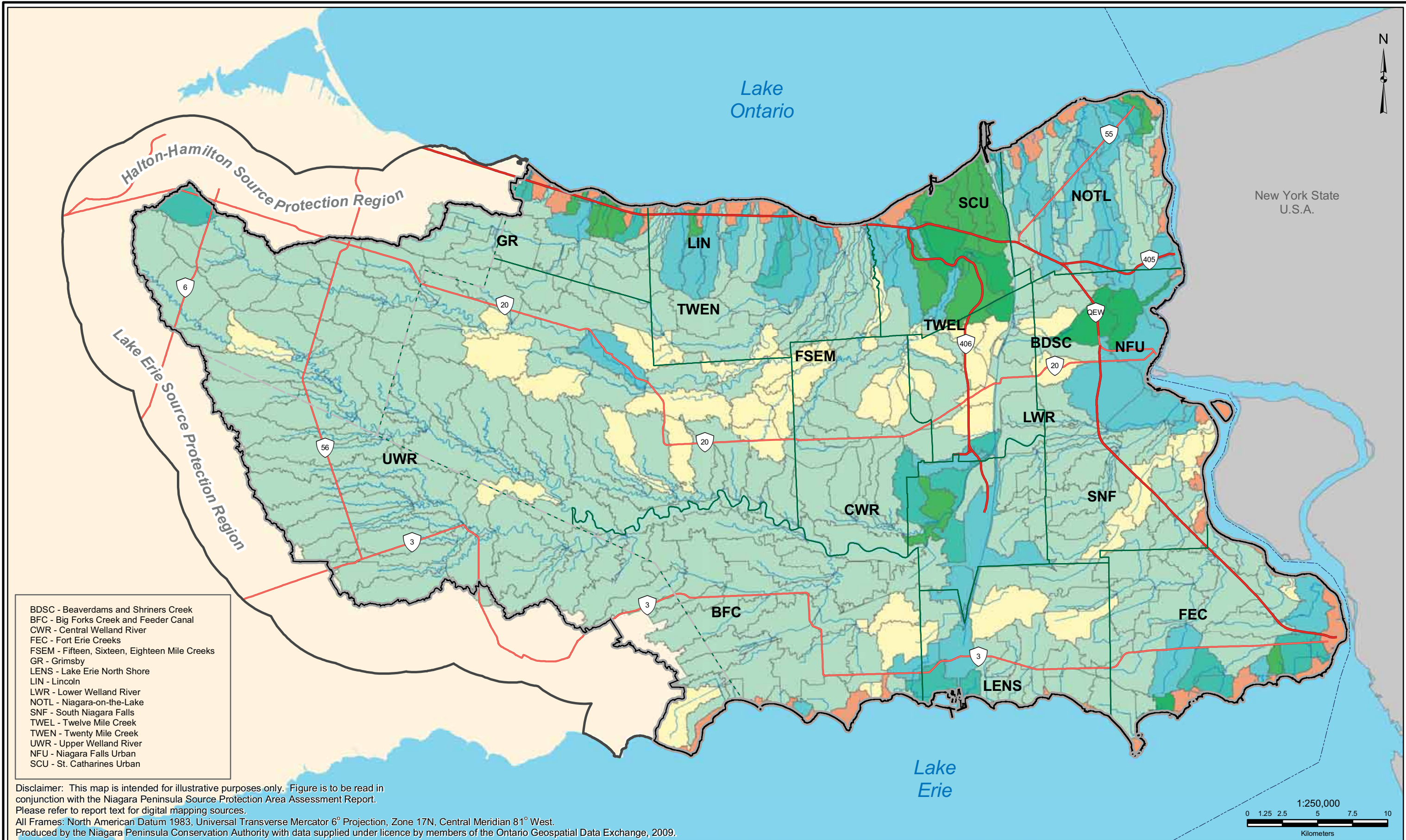
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Figure 3.3: Mean Annual Snowfall Water Equivalent

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#### Legend

- International Boundary
- Major Highways
- Highways
- Roads
- Watercourse
- Ponds, Reservoirs, Lakes
- Niagara Peninsula Source Water Protection Area
- Lower Tier Municipality
- Upper Tier Municipality

- NPCA Gauges - Active
- Water Survey Canada Gauges - Active
- Water Survey Canada Gauges - Inactive

Gauged Areas

Additional stations exist, preliminary information is listed below:  
St. Lawrence Seaway management Corporation operates two water level stations on the Welland Canal  
Ontario Power Generation measures flows coming from the Decew Falls Power Generating Station  
The City of St. Catharines also measures water level at the Martindale Pond and flows at the Heywood Power Generating Station

\*Please note that surface water gauges record water levels and that flows are not measured but are calculated by correlation to derived stage-discharge relationships. The Twelve and Four Mile Creek gauges have been operational for less than two years and their flow curves are still under development. Black Creek at Stevensville was formerly a Water Survey Canada station prior to being reactivated by the NPCA for flood forecasting purposes, however due to backwater effects from power generation along the Niagara River, stage is only of interest at this gauge.



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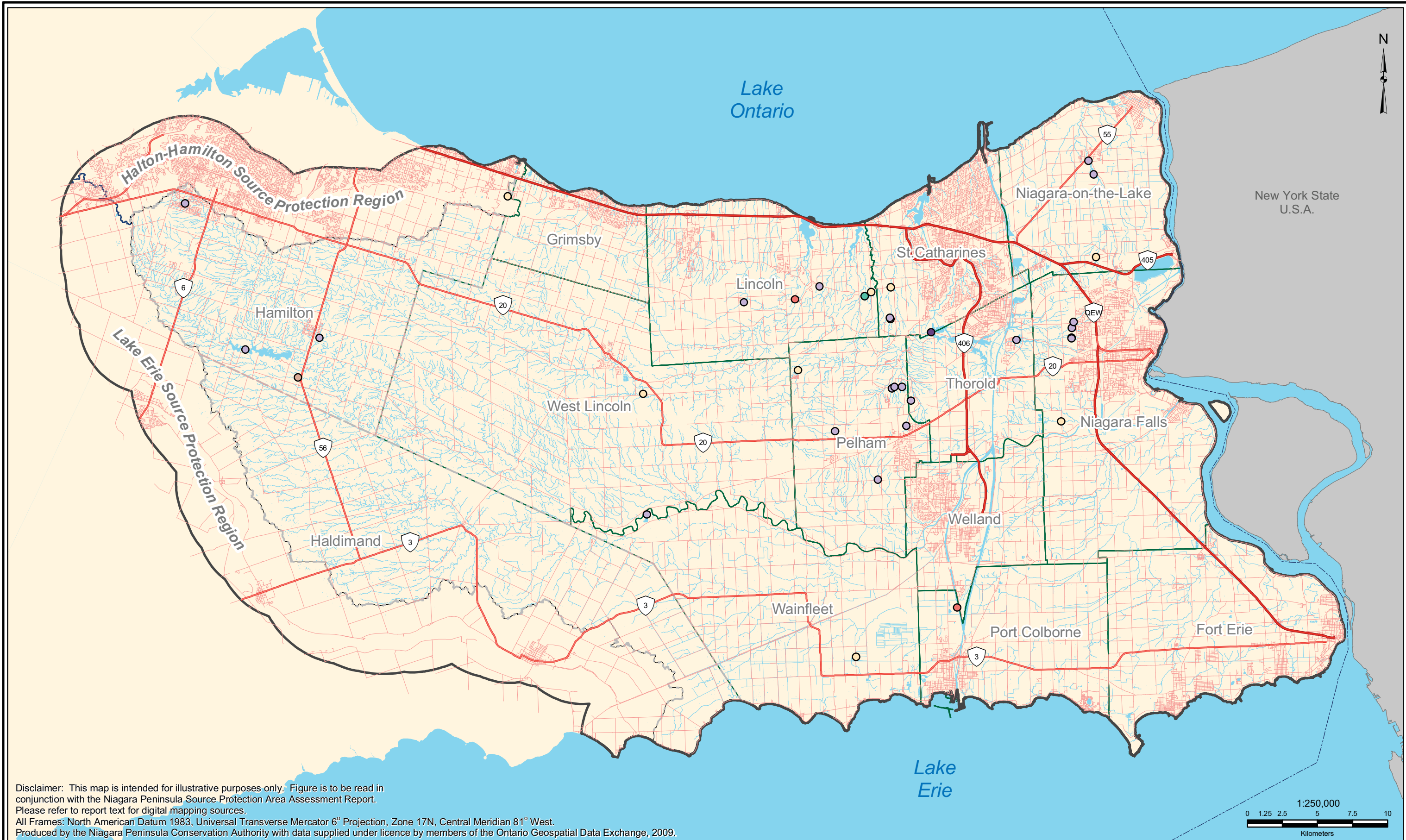
Figure 3.7: Surface Water Gauges




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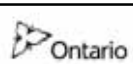



Legend		Structure Type	
--- International Boundary	Watercourse	Concrete	Gabion baskets, steel sheets
Major Highways	Ponds, Reservoirs, Lakes	Earth and Rock filled dam	Steel Sheet Piling
Highways	Niagara Peninsula Source Water Protection Area	Earthfill embankment	Timber and steel sheet piling
Roads	Lower Tier Municipality		
	Upper Tier Municipality		

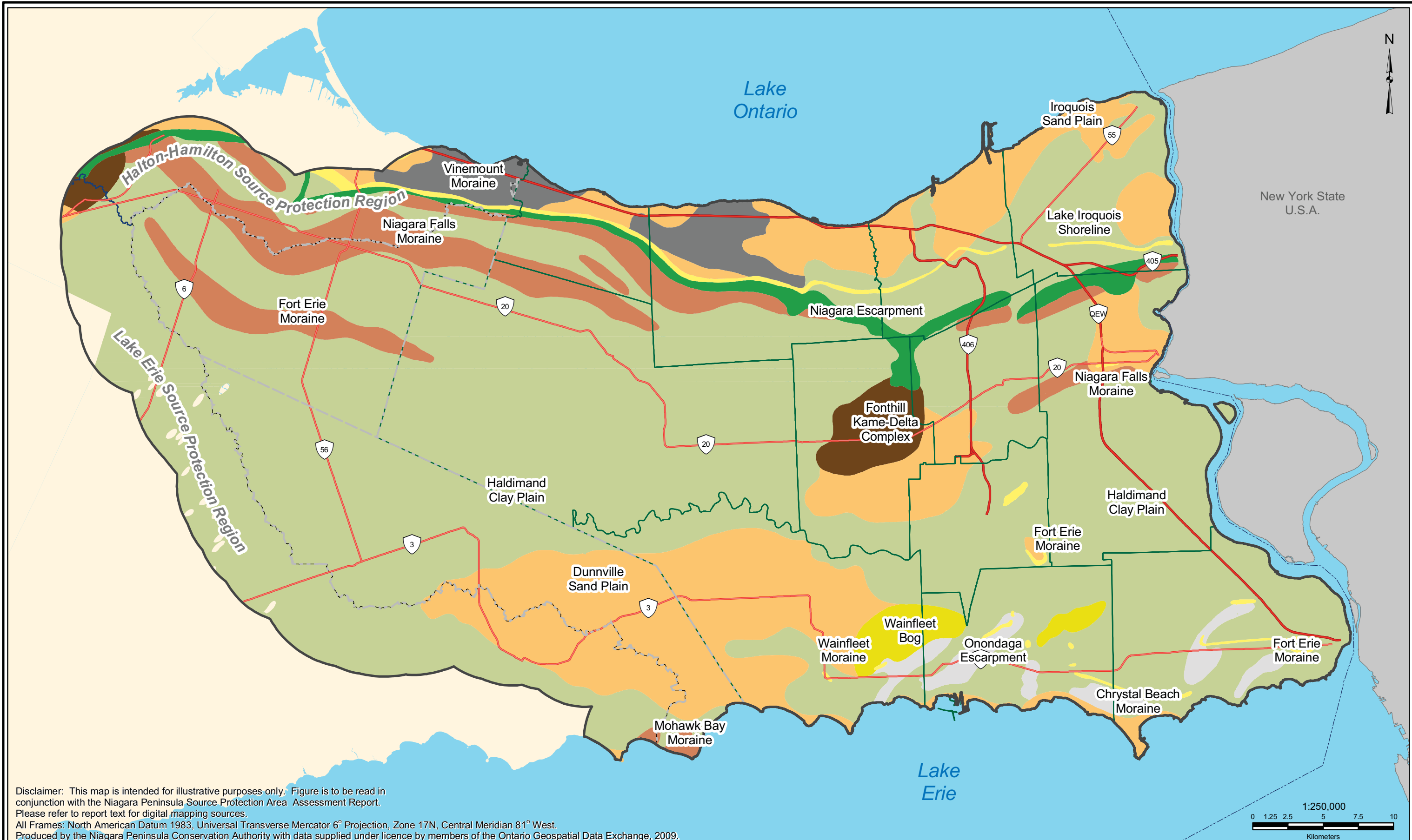




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*Figure 3.8: Surface Water Control Structures*  
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**Legend**

--- International Boundary	~ Watercourse	Lower Tier Municipality	Beaches and Shorecliffs	Kame Moraine
Major Highways	Ponds, Reservoirs, Lakes	Upper Tier Municipality	Escarpment	Peat and Muck
Highways	Extended Context Area		Clay Plain	Limestone Plain
Roads	Niagara Peninsula Source Water Protection Area		Sand Plain	Shale Plain
			Till Moraine	Water

**DRINKING WATER SOURCE PROTECTION**  
ACT FOR CLEAN WATER

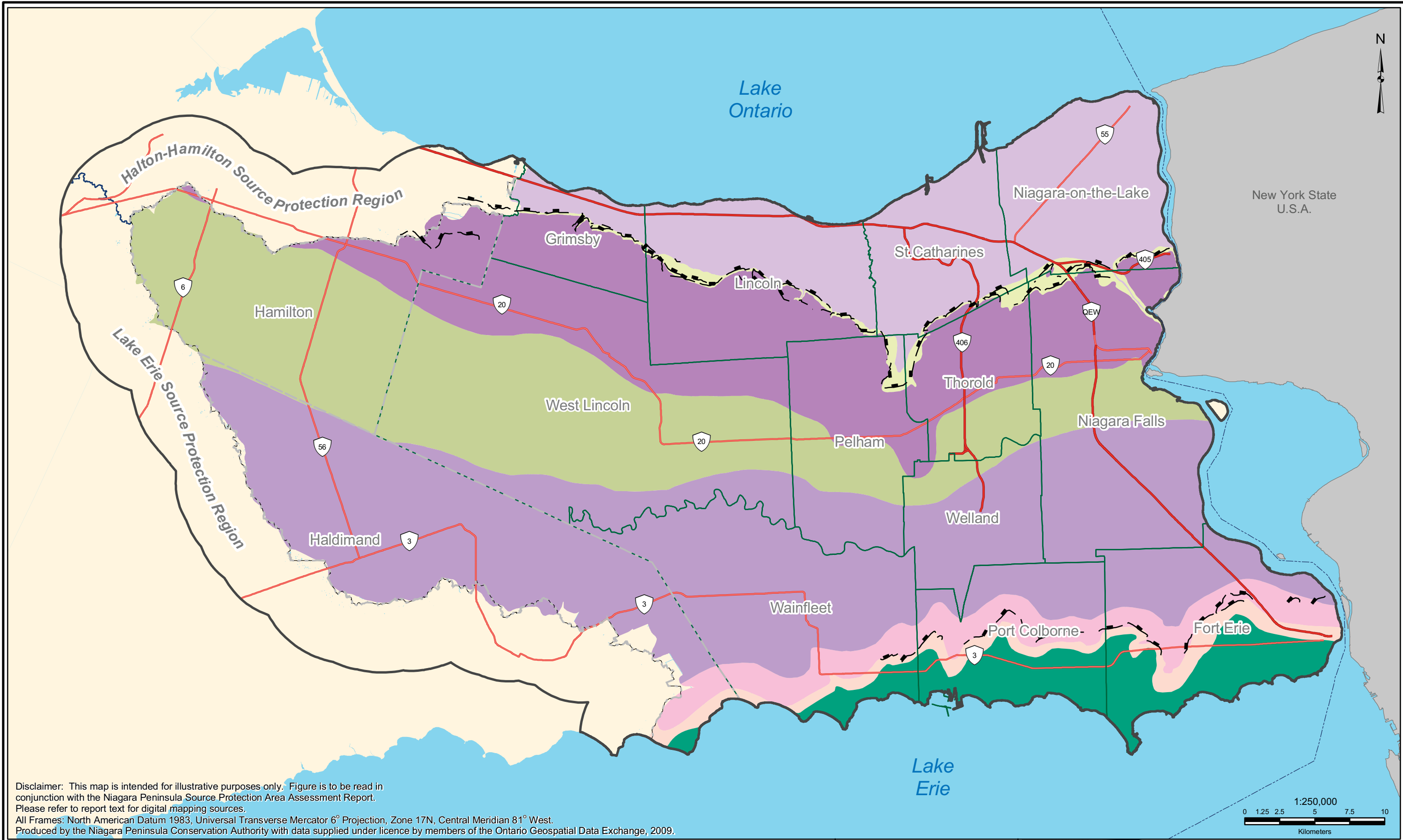
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*Figure 3.9: Physiography*

**NIAGARA PENINSULA CONSERVATION AUTHORITY**

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<b>Legend</b>		<b>Bedrock Geology</b>	
--- International Boundary	~ Watercourse	Lower Tier Municipality	Bertie Formation
Major Highways	Ponds, Reservoirs, Lakes	Upper Tier Municipality	Bois Blanc Formation
Highways	Extended Context Area	Escarpment	Clinton - Cataract Group
Roads	Niagara Peninsula Source Water Protection Area		Onondaga Formation
			Guelph Formation
			Lockport Group
			Queenston Formation
			Salina Formation

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**Figure 3.10: Bedrock Geology**

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